

PROJECT WET - Alignment with Maryland Voluntary State Curriculum Grades 9-12ⁱ

DERBY DILEMMA – GRADES 6-12; PAGE 377

STUDENTS DEBATE THE PROS AND CONS OF DIFFERENT SOLUTIONS TO WATER MANAGEMENT ISSUES.

Government/History	Science	Math/English
<p>Government:</p> <p>1.0 Political Science - A. The Foundations & Functions of Government: 3. Governmental roles & policies regarding public issues. a. (EPA) (1.1.3). b. (environmental issues); e. (environmental policy); B. Economic Systems & the Role of Government in the Economy. 3. Regulatory agencies & their social, economic, & political impacts (e.g. EPA) (4.1.3); C. Protecting Rights & Maintaining Order: 3. Impact of government decisions & actions (1.2.3). e. (EPA environmental standards; MD Dept. of Environment, regulations).</p> <p>3.0 Geography: A. Use Geographic Tools. 1. a. Compare climate, land use, natural resources, population distribution, demographic and density maps of Maryland & the U.S.; B. Geographic Characteristics of Places & Regions. 1. (population growth & impacts on environment; how natural resources & population define a region). c. how regional natural resources & environmental issues influence govt. policies; C. Movement of People, Goods & Ideas. 1. d. population trends & projections & how they affect the environment; D. Modifying the Environment 1. Role of government in addressing land use & other environmental issues (3.1.2). a (leg. decisions on land use & environ. issues); b. how local govt. control land use & manage growth through zoning); c. State executive branch addresses land use (Smart Growth; deforestation; urban sprawl, pollution, natural disasters, water resources, wetland preservation & critical areas; d. role of state & local govts. in addressing land use (zoning; moratoriums & wetland preservation); e. evaluate how fed. State & local govt. develop policy to address land use & environ. Issues (urban sprawl, Smart Growth).</p> <p>4.0 Economics: A. Scarcity & Economic Decision-making. 1. d. (public policy issues, such as environmental concerns); B. Economic Systems & the Role of Government in the Economy. 3. Regulatory agencies & their social, economic, & political impacts (4.1.3). (e.g., EPA).</p> <p>History: 5.2 Political Science (legislative attempts to address pollution; Clean Water Act; EPA regulations); impact of regulatory agencies (EPA); People of the Nations & World (impact of environmental movement); Geography (impact of environmental</p>	<p>Goal 1 Skills & Processes</p> <p>Goal 3 Biology</p> <p>3.6 Investigate a biological issue (consequences & trade-offs between technology & environment; defend their position on biodiversity, population growth, global sustainability, etc.).</p> <p>Natural Resources and Human Needs</p> <p>6.12.4 Use concepts from chemistry, physics, biology, and ecology to analyze & interpret the impact both positive (recycling) & negative (toxic wastes) of human activities on the earth's resources (land, water, air, energy, biological): Interrelationships between: humans & air quality (CLG 6.3.1); humans & water quality (CLG 6.3.2); humans & land resources (CLG 6.3.3); humans & biological resources (CLG 6.3.4); humans & energy resources (CLG 6.3.5).</p> <p>Environmental Issues</p> <p>6.3.5 Using the environment to meet one's wants & needs has consequences (i.e., pollution, extinction); 6.5.5 Decisions influencing the environment may have benefits, drawbacks, & unexpected consequences no matter how carefully the decisions are made; 6.8.5 Human activities can accelerate or magnify many naturally occurring changes (i.e., erosion, air and water quality, populations) (MLO 6.2); 6.12.5 Investigate & analyze environmental issues from local to global perspectives (e.g., world population, food production & distribution, pollution & epidemics, biodiversity) to develop an action project that protects, sustains, or enhances the natural environment; Identify an environmental issue and formulate related research questions (CLG 6.4.1); Design and conduct the research (CLG 6.4.2); Interpret findings to form conclusions and make recommendations to help resolve the issue (CLG 6.4.3); Apply the conclusions to develop and implement an action project (CLG 6.4.4); Analyze the effectiveness of the action project in terms of achieving the desired outcomes (CLG 6.4.5).</p>	<p>None</p>

disasters); **Economics** (economic impact of pollution controls).

U.S. History: 4.1 Geography (evolution of suburbia)

5.2 Understanding of political, economic & cultural developments from 1964-1980. Political Science (endangered species act); **6.2**

Domestic events, politics & policy from 1981-present: Peoples of the Nation & World (impact of health crisis); **Geography** (impact of urban sprawl).

HOT WATER – GRADES 9-12; PAGE 388

USING DEBATE STRATEGIES, STUDENTS LEARN HOW TO PRESENT A VALID ARGUMENT REGARDING A WATER-RELATED ISSUE.

Government/History

[depending on students' topic choice, potential exists to meet:

Government: 1.0 Political Science - A. 3. Governmental roles & policies regarding public issues. **B. 3.** Regulatory agencies & their social, economic, & political impacts (e.g. EPA); **C. 3.** Impact of government decisions & actions; **3.0 Geography: A.1. a.** Compare climate, land use, natural resources, population distribution, demographic and density maps of Maryland & the U.S.; **B. 1.** Gov. policy (population growth & impacts on environment; how natural resources & population define a region); **C. 1. d.** population trends & projections & how they affect the environment; **D. 1. a.** Legislative decisions on land use & environ. issues; b. How local govt. control land use & manage growth through zoning; c. State executive branch addresses land use; d. Role of state & local govts. in addressing land use; e. Evaluate how fed. State & local govt. develop policy to address land use & environ. Issues; **4.0 Economics: A. 1. d.** Public policy issues, such as environmental concerns; **B. 3.** Regulatory agencies & their social, economic, & political impacts; **World History: 3.0 Geography: 3.1** Interactions of environmental factors & the location & distribution of human activity (land use patterns before & after agricultural mechanization); **3.1.2** Impact of human settlement patterns on the environment (greenhouse effect); **History: 5.2 Political Science** (legislative attempts to address pollution; Clean Water Act; EPA regulations); impact of regulatory agencies (EPA); **People of the Nations & World** (impact of environmental movement); **Geography** (impact of environmental disasters); **Economics** (economic impact of pollution controls); **U.S. History: 4.1 Geography** (evolution of suburbia); **5.2 Political Science:** (endangered species act); **6.2** (impact of health crisis); **Geography** (impact of urban sprawl).]

Science

Goal 1 Skills & Processes

[potential exists to meet other science standards but is dependent on students' choice of debate topics]

Math/English

English

2.1 Compose oral, written and visual presentations that inform, persuade, & express personal ideas.

2.3 Locate, retrieve & use information from various sources to accomplish a purpose.

WATER CROSSINGS – GRADES 4-12; PAGE 421

STUDENTS PARTICIPATE IN A WATER-CROSSING CONTEST IN WHICH THEY MUST MOVE THEIR POSSESSIONS (A HARD-BOILED EGG) ACROSS A SPAN OF WATER (A CAKE PAN).

Government/History	Science	Math/English
World History: 3.0 Geography: 3.1 Evaluate the interactions of environmental factors and the location and distribution of human activity (land use patterns before & after agricultural mechanization). U.S. History: 4.1 Geography (evolution of suburbia) 6.2 Geography (impact of urban sprawl).	None	None

GREAT WATER JOURNEYS – GRADES 6-12; PAGE 246

USING A GLOBAL MAP AND A SET OF CLUE CARDS, STUDENTS LOCATE SOME SIGNIFICANT WATER JOURNEYS.

Government/History	Science	Math/English
<p>[potential exists to meet World History: 3.0 Geography: 3.1 Evaluate the interactions of environmental factors and the location and distribution of human activity (land use patterns before & after agricultural mechanization)].</p>	<p>Goal 2 Concepts of Earth/Space Science 2.5 Know how to connect prior understanding & new experiences to evaluate natural cycles. 2.5.1 Investigate various physical cycles found in the natural world [tides; currents].</p> <p>Goal 6 Environmental Science: Flow of Matter and Energy 6.1.2 The student will analyze how the transfer of energy between atmosphere, land masses and oceans results in areas of different temperatures and densities that produce weather patterns and establish climate zones around the earth [ocean currents].</p>	None

LONG HAUL – GRADES K-12; PAGE 260 - STUDENTS WORK IN TEAMS TO COMPETE IN A WATER-HAULING GAME.

Government/History	Science	Math/English
<p>[potential exists to meet Government: 3.0 Geography: A.1.a. Compare climate, land use, natural resources, population distribution, demographic & density maps of Maryland & the U.S; C. 1.d. population trends & projections & how they affect the environment; D. 1. Role of government in addressing land use & other environmental issues (3.1.2). a (leg. decisions on land use & environ. issues); b. how local govt. control land use & manage growth through zoning); c. State executive branch addresses land use (Smart Growth; deforestation; urban sprawl, pollution, natural disasters, water resources, wetland preservation & critical areas; d. role of state & local govts. in addressing land use (zoning; moratoriums & wetland preservation); e. evaluate how fed. State & local govt. develop policy to address land use & environ. Issues (urban sprawl, Smart Growth) – all in relation to availability of fresh water supplies compared to population growth; allocation of water].</p>	<p>Goal 3 Biology: 3.6 Investigate a biological issue (consequences & trade-offs between technology & environment; defend their position on biodiversity, population growth, global sustainability, etc.).</p> <p>Goal 6 Natural Resources and Human Needs 6.12.4 Use concepts from chemistry, physics, biology, and ecology to analyze & interpret the impact both positive (recycling) & negative (toxic wastes) of human activities on the earth's resources (e.g., water).</p> <p>6.3.5 Using the environment to meet one's wants and needs has consequences (i.e., pollution, extinction); 6.5.5 Decisions influencing the environment may have benefits, drawbacks, and unexpected consequences no matter how carefully the decisions are made; 6.8.5 Human activities can accelerate or magnify many naturally occurring changes (i.e., erosion, air & water quality, populations) (MLO 6.2); 6.12.5 Investigate & analyze environmental issues from local to global perspectives to develop an action project that protects, sustains, or enhances the natural environment (CLG 6.4.1).</p>	<p>Math Goal 1 Functions & Algebra 1.1 (apply math to real- world problems). Goal 2 Geometry Measurement & Reasoning 2.3 (area, volume). English - None</p>

Government/History	Science	Math/English
<p>Government: 3.0 Geography D. Modifying the Environment 1. Role of government in addressing land use & other environmental issues (3.1.2). a (leg. decisions on land use & environ. issues); b. how local govt. control land use & manage growth through zoning); c. State executive branch addresses land use (Smart Growth; deforestation; urban sprawl, pollution, natural disasters, water resources, wetland preservation & critical areas; d. role of state & local govts. in addressing land use (zoning; moratoriums & wetland preservation); e. evaluate how fed. State & local govt. develop policy to address land use & environ. Issues (urban sprawl, Smart Growth). 4.0 Economics: A. Scarcity & Economic Decision-making. 1. Economic costs & benefits & opportunity costs (4.1.2). d. (public policy issues, such as environmental concerns);</p> <p>History: 5.2 Political Science (legislative attempts to address pollution; Clean Water Act; EPA regulations); impact of regulatory agencies (EPA); Economics (economic impact of pollution controls).</p> <p>U.S. History: 4.1 Geography (evolution of suburbia) 6.2 Domestic events, politics & policy from 1981-present: Peoples of the Nation & World (impact of health crisis); Geography (impact of urban sprawl).</p>	<p>Goal 1 Skills & Processes</p> <p>Goal 3 Biology 3.6 Investigate a biological issue (consequences & trade-offs between technology & environment; defend their position on biodiversity, population growth, global sustainability, etc.).</p> <p>Goal 6 Natural Resources and Human Needs 6.12.4 Use concepts from chemistry, physics, biology, and ecology to analyze and interpret the impact both positive (recycling) and negative (toxic wastes) of human activities on the earth's resources (land, water, air, energy, biological): Evaluate the interrelationships between humans and air quality (CLG 6.3.1); Evaluate the interrelationship between humans and water quality and quantity (CLG 6.3.2); Evaluate the interrelationships between humans and land resources (CLG 6.3.3); Evaluate the interrelationships between humans and biological resources (CLG 6.3.4); Environmental Issues: 6.3.5 Using the environment to meet one's wants and needs has consequences (i.e., pollution, extinction); 6.5.5 Decisions influencing the environment may have benefits, drawbacks, and unexpected consequences no matter how carefully the decisions are made; 6.8.5 Human activities can accelerate or magnify many naturally occurring changes (i.e., erosion, air and water quality, populations) (MLO 6.2); 6.12.5 Investigate and analyze environmental issues from local to global perspectives (e.g., world population, food production and distribution, pollution and epidemics, biodiversity) to develop an action project that protects, sustains, or enhances the natural environment; Identify an environmental issue and formulate related research questions (CLG 6.4.1). Design and conduct the research (CLG 6.4.2); Interpret findings to form conclusions and make recommendations to help resolve the issue (CLG 6.4.3); Apply the conclusions to develop and implement an action project (CLG 6.4.4); Analyze the effectiveness of the action project in terms of achieving the desired outcomes (CLG 6.4.5).</p>	<p>English 2.1 Compose oral, written and visual presentations that inform, persuade, & express personal ideas.</p> <p>2.3 Locate, retrieve & use information from various sources to accomplish a purpose.</p>

ⁱ Activities meet standards as noted. When a standard is listed without notation, the activity meets the standard fully.